TIERRA SOLUTIONS, INC.

April 9, 2004

U.S. Environmental Protection Agency, Region II
Emergency and Remedial Response Division
290 Broadway, 19th Floor, Room W-20
New York, NY 10007-1866

Attention: Ms. Alice Yeh
Remedial Project Manager

Subject: Non-Chemistry Data Submittal: Groups 3 (Remaining) and 4
Passaic River Study Area
Administrative Order on Consent Index No. II-CERCLA-0117

Dear Ms. Yeh:

Please find enclosed a CD containing non-chemistry data associated with the remainder of Group 3, and all of Group 4, as requested by EPA during our telephone conversation of December 9, 2003. At that time we discussed submittal of these data in four (4) sequential groups. Group 1 was submitted on February 5, 2004, Group 2 was submitted on February 27, 2004, and a portion of Group 3 (tide data only) was submitted on March 31, 2004.

The enclosed CD contains the following datasets according to the groupings requested by EPA:

Group 3 (remainder)
- Acoustic Doppler Current Profilers (ADCP)
- Moored Current Meters
- Near-Bottom Current Meters and associated ADCP

Group 4
- Bathymetry
- Piezo-cone
- Rotating Cylinder
- Sedflume
- Vane Shear

10th floor
Two Tower Center Blvd. East Brunswick, New Jersey 08816

All of these datasets were collected in accordance with the Passaic River Study Area RI/FS Work Plans (January 1995) with the following exceptions. Neither the Near-Bottom Current meter measurements or the Sedflume erosion measurements were anticipated in the RI/FS Work Plans.

All of the data provided in this submittal have been subjected to the quality review program described during the above-referenced meeting. The QA/QC process included the review of a minimum of 10% of the results (on a random basis) to the original lab sheets or data summaries. This review was used to identify and correct errors. Errors were evaluated to determine those that were systematic or random. Systematic errors were fixed throughout the dataset (i.e., beyond the 10% of values under review) or noted. Random errors were fixed for the identified occurrences. Where systematic errors were found, an additional 10% (or more) of the data were reviewed and corrected as appropriate. The number of random errors was evaluated to determine the need for a check of an additional 10% subset of the data. The variables included in the QA/QC review were: the result and the units associated with the result, the sample location and depth interval, and, where available, calculations used to develop the results into a reported value.

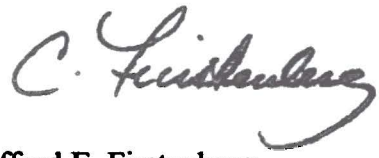
At the meeting on January 21st, 2004, we reviewed the aforementioned data specific to Harrison Reach. Following are some initial characterizations that may be drawn from additional review of these data sets, considered for the full Passaic River Study Area.

- The ADCP and moored current meter show that regularly reversing tidal flows are superimposed on the net non-tidal river flow.
- The near-bottom current measurements may, upon additional analysis provide some insights into the logarithmic boundary layer flows and imparted stress at the sediment surface.
  The erosion measurements suggest that the normally active surface sediment involves only a thin layer with critical shear stresses increasing with depth.
  Vane shear and piezo-cone results confirm the presence of soft, fine-grained (and therefore cohesive) material in the top two to three feet of sediment.
- The sequence of bathymetric records confirms that the Passaic River Study Area is a net depositional environment and that although there may be areas of erosion, these are typically found around abutments and other man-made features, or are possibly transient in nature.

In the process of preparing this submittal, a number of changes were identified for the Mast Sample Indexes previously provided. An updated Master Sample Index for all Groups (Groups 1, 2, 3, and 4) reflective of the QA/QC process will be provided at a later date.

As you work with these data, please contact me if you find anomalies, errors, inconsistencies, etc. We want to ensure that all parties involved in this project are using the best data set available and will work with EPA, NJOMR, and your contractors to resolve any problems and reissue a corrected database, if necessary.

Sincerely,



Clifford E. Firstenberg
Project Manager
On behalf of Occidental Chemical Corporation
(as successor to Diamond Shamrock Chemicals Company)

Enclosure